

REMARKS

Claims 27 through 57 are now pending in the application. Claims 41 through 57 are added. Claims 1 through 26 and claim 34 are cancelled without prejudice or disclaimer to the subject matter contained therein. Applicants reserve the right to refile these cancelled claims in one or more subsequent applications. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 27-30 and 36-40 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Stoffer et al. This rejection is respectfully traversed.

At the outset, Applicants submit that the amendments to claim 27 and the cancellation of claim 34 have rendered moot the rejections of the claims.

Claim 27 has been amended to clarify that the method includes “actively cooling a mixture of the additive and coating component by receiving from the mixing reservoir at least a portion of the mixture within a heat exchanger of a cooling loop; urging the mixture from the heat exchanger to a valve of the cooling loop; diverting at least a portion of the mixture having a temperature within a desired temperature range from the valve to a storage container; and returning to the mixing reservoir any portion of the mixture not diverted from the valve.” Claim 27 is believed to be allowable because the cited documents do not at least disclose, teach, or suggest these features.

For example, the Stoffer publication does not disclose, teach, or even remotely suggest a cooling loop having a heat exchanger and valve, or diverting at least a portion of a mixture having a temperature within a desired temperature range from a valve to a storage container. Instead, Stoffer merely discloses a bath having a temperature of 25 or 45 degrees Celsius for keeping the contents within a 400ml beaker at a constant temperature. See, for example, Stoffer page 65.

The Stoffer bath, however, is clearly not a cooling loop with a heat exchanger and a valve. Accordingly, Stoffer does not disclose “actively cooling a mixture of the additive and coating component by receiving from the mixing reservoir at least a portion of the mixture within a heat exchanger of a cooling loop; urging the mixture from the

heat exchanger to a valve of the cooling loop; diverting at least a portion of the mixture having a temperature within a desired temperature range from the valve to a storage container; and returning to the mixing reservoir any portion of the mixture not diverted from the valve.” Therefore, Stoffer does not disclose each and every feature of claim 27, and, accordingly, cannot anticipate claim 27. For at least these reasons, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 27.

Applicants also respectfully submit that Stoffer would not be a proper Section 103 reference either. This is because Stoffer appears to teach away from using a cooling loop to actively cool a mixture in that Stoffer seems to suggest using higher temperatures for the dispersion process in order to obtain quicker dispersion times. See, for example, Stoffer, page 66, column 1: “The temperature of the ultrasonically excited fluid was of decisive importance in dispersion action.” Stoffer further explains that the dispersion time was cut in half when the water temperature within the Stoffer bath was increased from 25 degrees to 45 degrees Celsius. See, for example, Stoffer page 66, column 1: “It took half the time by increasing the water temperature to 45°C.” See also Stoffer, page 66 column 2: “Also, as the temperature increases, the solubility of gases located in the liquid decreases, and as a consequence of this, the intensity of the shock wave which is formed when a cavitation bubble collapses is enhanced.” Because Stoffer suggests the use of higher temperatures for dispersion processes, Applicants respectfully submit that Stoffer would not be a proper Section 103 reference for rejecting claim 27 or any claim depending therefrom. See MPEP § 2143.01 “The proposed modification cannot render the prior art unsatisfactory for its intended purpose”, and MPEP § 2145 “It is improper to combine references where the references teach away from their combination.”

Moreover, the documents cited in the Office action also fail to recognize the advantages that may be realized with a cooling loop having a heat exchanger and a valve. For example, portions of a cooled mixture can be diverted at the valve to allow for earlier storage of the final product. In Falcoff, this early storage and diversion is not possible because Falcoff simply removes the entire final product in a single batch directly from the mixing reservoir through a drain as shown in Falcoff Figure 1.

With regard to claims 28-33 and 36-40 these claims ultimately depend from claim 27, which Applicants believe to be allowable in view of the above remarks. As such, Applicants submit that claims 28-33 and 36-40 are allowable for at least these reasons.

In addition, claims 28-33 and 36-40 are further patentably distinguishable over the cited documents in that the cited documents do not disclose, teach or suggest the additional features required by these claims. For example, Stoffer does not disclose, teach, or suggest a method that includes both ultrasonically dispersing and mechanically agitating the mixture, as required by claim 30. Instead, Stoffer only discloses ultrasonic dispersion. In various exemplary embodiments described in Applicants specification, there is provided a vortex generator or mechanical agitator, which facilitates mixing of the various coating components within the reservoir. See, for example, the specification at paragraph [0039] and FIGS. 3 and 4. For these additional reasons, Applicants respectfully request reconsideration and withdrawal of the Section 102b rejections.

REJECTION UNDER 35 U.S.C. § 103

Claims 31-33

Claims 31-33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Stoffer in view of Mapother (U.S. Pat. No. 1,781,648). This rejection is respectfully traversed.

Claims 31-33 ultimately depend from claim 27, which Applicants believe to be allowable in view of the above remarks. As such, Applicants submit that claims 31-33 are allowable for at least these reasons.

In addition, Applicants further note that Mapother does not disclose any cooling loops. Accordingly, Mapother cannot make up for the shortcomings of the Stoffer publication's failure to disclose, teach, or suggest each and every feature of claim 27 as noted above.

Moreover, Stoffer appears to teach away from using a cooling loop to actively cool a mixture because Stoffer seems to suggest using higher temperatures for the dispersion process in order to obtain quicker dispersion times. See, for example, Stoffer, page 66, column 1: "The temperature of the ultrasonically excited fluid was of

decisive importance in dispersion action.” Stoffer further explains that the dispersion time was cut in half when the water temperature within the Stoffer bath was increased from 25 degrees to 45 degrees Celsius. See, for example, Stoffer page 66, column 1: “It took half the time by increasing the water temperature to 45°C.” See also Stoffer, page 66 column 2: “Also, as the temperature increases, the solubility of gases located in the liquid decreases, and as a consequence of this, the intensity of the shock wave which is formed when a cavitation bubble collapses is enhanced.” Because Stoffer suggests the use of higher temperatures for dispersion processes, Applicant respectfully submits that Stoffer is not a proper Section 103 reference for rejecting claim 31-33. See MPEP § 2143.01 “The proposed modification cannot render the prior art unsatisfactory for its intended purpose”, and MPEP § 2145 “It is improper to combine references where the references teach away from their combination.” For these additional reasons, Applicants respectfully request reconsideration and withdrawal of the rejections to claim 31-33.

Claims 34-35

Claims 34-35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Stoffer in view of Falcoff et al. (U.S. Pat. No. 4,403,866). This rejection is respectfully traversed.

The cancellation of claim 34 has rendered moot the rejections thereto.

Claim 35 depends from claim 27, which Applicants believe to be allowable in view of the above remarks. As such, Applicants submit that dependent claim 35 is allowable for at least the reasons given above in connection with claim 27.

In addition, Applicants note that Falcoff does not disclose, teach, or remotely suggest a cooling loop having a valve that facilitates diverting portions of the mixture from the cooling loop to a storage container. Instead, Falcoff merely discloses a drain for removing the entire final product as a single batch directly from a mixing reservoir or cell. See, for example, Falcoff Figure 1. Accordingly, Falcoff cannot make up for the shortcomings of the Stoffer publication’s failure to disclose, teach or suggest each and every feature of claim 27 as noted above.

Moreover, Stoffer appears to teach away from using a cooling loop to actively cool a mixture because Stoffer seems to suggest using higher temperatures for the

dispersion process in order to obtain quicker dispersion times. See, for example, Stoffer, page 66, column 1: "The temperature of the ultrasonically excited fluid was of decisive importance in dispersion action." Stoffer further explains that the dispersion time was cut in half when the water temperature within the Stoffer bath was increased from 25 degrees to 45 degrees Celsius. See, for example, Stoffer page 66, column 1: "It took half the time by increasing the water temperature to 45°C." See also Stoffer, page 66 column 2: "Also, as the temperature increases, the solubility of gases located in the liquid decreases, and as a consequence of this, the intensity of the shock wave which is formed when a cavitation bubble collapses is enhanced." Because Stoffer suggests the use of higher temperatures for dispersion processes, Applicant respectfully submits that Stoffer is not a proper Section 103 reference for rejecting claim 35. See MPEP § 2143.01 "The proposed modification cannot render the prior art unsatisfactory for its intended purpose", and MPEP § 2145 "It is improper to combine references where the references teach away from their combination." For these additional reasons, Applicants respectfully request reconsideration and withdrawal of the rejections to claim 35.

NEW CLAIMS

Claims 41 through 57 are supported by the application as originally filed. Accordingly, no new matter is introduced by the addition of claims 41 through 57.

Claims 41 through 57 depend from independent claim 27 shown above to be allowable. Accordingly, Applicants respectfully submit that claims 41 through 57 are allowable for at least the reasons given above in connection with independent claim 27. In addition, Applicants respectfully submit that claims 41 through 57 are further patentably distinguishable over the cited documents in that the cited documents do not disclose, teach or suggest the additional features required by all these claims.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office

Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned directly at (314) 726-7502.

Applicants believe that they do not owe any fee in connection with this filing. If, however, Applicants do owe any such fee(s), the Commissioner is hereby authorized to charge the fee(s) to Deposit Account No. 08-0750. In addition, if there is ever any other fee deficiency or overpayment under 37 C.F.R. §1.16 or 1.17 in connection with this patent application, the Commissioner is hereby authorized to charge such deficiency or overpayment to Deposit Account No. **08-0750**.

Respectfully submitted,

By: 

Anthony Fussner, Reg. No. 47,582

Dated: December 21, 2005

HARNESS, DICKEY & PIERCE, P.L.C.
7700 Bonhomme, Suite 400
St. Louis, Missouri, 63105
(314) 726-7500
AGF/dmkd